

CLAIMS

1. A method for operating a mobile communication unit
2 having a database containing data records for one or more telephone
numbers with each data record containing an index item stored by a
4 character string, said method comprising:

5 searching said database for an index item beginning with a
6 desired character string; and

7 automatically switching said mobile communication unit to a
8 normal telephone number entry mode if said database contains no data
9 records having an index item potentially matching said desired character
10 string.

11 2. The method of claim 1 further comprising displaying
12 said desired character string after switching to normal telephone number
13 entry mode.

14 3. The method of claim 1 further comprising retaining said
15 desired character string after switching to normal telephone number entry
16 mode.

17 4. The method of claim 3 further comprising modifying
18 said desired character string after switching to said normal telephone
19 number entry mode by appending one or more additional characters to said
20 desired character string.

5. The method of claim 1 further comprising recognizing any characters added to said desired character string after switching to normal telephone number entry mode as additional numerical characters and appending said additional numerical characters to said desired character string.

6. The method of claim 1, further comprising:
 - selecting said desired character string; and
 - selecting between calling said desired character string and calling a speed dial number associated with said desired character string.

7. The method of claim 6, wherein said selecting between calling said desired character string and calling a speed dial number associated with said desired character string comprises pressing a SEND key immediately after said selecting said desired character string to call said desired character string and pressing said SEND key after pressing a selected other key after said selecting said desired character string to call said speed dial number.

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8. A method for placing a call using a mobile communication unit operable alternatively in database search mode of telephone number entry or a normal telephone number entry mode and having a display, a keypad having number keys and a scroll key for scrolling said display, a database for storing data records for telephone numbers with each data record containing a frequency with which said mobile unit calls each of said telephone numbers in said database and an index item stored by a character sequence, said method comprising:

inputting a desired character sequence using said number keys of said keypad;

searching said database in said database search mode for said index items matching said desired character sequence; and

automatically switching said mobile communication unit to normal telephone number entry mode if said database has no index items potentially matching said desired character string.

9. The method of claim 8 further comprising recognizing any characters input after said step of switching to normal phone number entry mode as additional numerical characters and appending said additional numerical characters to said desired character string.

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10. The method of claim 8 further comprising:

2 displaying a portion of said data records including index items
matching said desired character sequence on said display;

4 modifying said desired character sequence by inputting an
additional character with said keypad to be appended to said desired
6 character sequence to create a new desired character sequence;

8 searching said database for said index items matching said
new desired character sequence;

10 displaying a portion of said data records including index items
matching said new desired character sequence on said display; and

12 automatically switching said mobile communication unit to
normal telephone number entry mode if said database has no index items
potentially matching said new desired character string.

14. The method of claim 10 further comprising recognizing
any characters input after said step of switching to normal phone number
entry mode as additional numerical characters and appending said
additional numerical characters to said desired character string.

16. The method of claim 10 further comprising repeating
said steps of claim 10 by modifying said new character string to create
one or more additional new desired character strings and automatically
switching said mobile communication unit to said normal telephone entry
mode if said database has no index items potentially matching said one or
more additional new character strings.

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13. The method of claim 12 further comprising recognizing
2 any characters input after said step of switching to normal phone number
entry mode as additional numerical characters and appending said
4 additional numerical characters to said desired character string.

14. The method of claim 9 wherein said data records
2 further contain a frequency with which each of said telephone numbers in
said database is called by said mobile communication unit, and said
4 method further comprises displaying said index items potentially matching
said desired character string in a list ordered first by said frequency that
said telephone number for that data record is called by said mobile
communication unit, and ordered second alphabetically for telephone
numbers called with equal frequency by said mobile communication unit,
and automatically switching said mobile communication unit to normal
telephone number entry mode if said database has no index items
potentially matching said desired character string.

15. The method of claim 8, wherein said desired character
2 sequence comprises a number sequence, further comprising:
4 selecting said number sequence; and
 selecting between calling said number sequence and calling
a speed dial number associated with said number sequence.

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16. The method of claim 15, wherein said selecting
2 between calling said number sequence and calling a speed dial number
4 associated with said number sequence comprises pressing a SEND key
6 immediately after said selecting said number sequence to call said number
sequence and pressing said SEND key after pressing a selected other key
after said selecting said number sequence to call said speed dial number
associated with said number sequence.

17. The method of claim 8, further comprising:
2 selecting a first displayed data record;
4 calling said telephone number of said selected first displayed
data record;
6 automatically selecting a second displayed data record
8 responsive to said calling said telephone number of said selected first
displayed data record being unsuccessful.

18. The method of claim 17, wherein said second displayed
data record is the data record of said displayed data records other than
said first displayed data record which has been called most frequently.

19. A mobile communication unit comprising:

2 a database storing data records for one or more telephone
4 numbers with each data record containing a stored character string
corresponding to each phone number stored in said database;

6 a keypad for inputting a desired character string; and

8 a controller for receiving said desired character string and
10 searching said database in a database search telephone number entry
mode for said data records having stored character strings beginning with
12 said desired character string, and automatically switching said mobile
14 communication unit to a normal telephone entry mode if said database
does not contain any stored character string potentially beginning with
said desired character string.

10 20. The mobile communication unit of claim 19 further
comprising a screening circuit in said controller determining if said
database includes any data records containing a stored character string
beginning with said desired character string and causing said controller to
switch said mobile communication unit to said normal phone number entry
6 mode if said database does not contain any data record having a stored
character string potentially beginning with said desired character string.

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2 21. The mobile communication unit of claim 19 wherein
4 said controller is configured to retain said desired character string after
6 switching said mobile communication unit to said normal entry mode and
 for sequentially appending additional inputs from said keypad received
 from said keypad to said desired character string after switching to said
 normal telephone number entry mode.

2 22. The mobile communication unit of claim 19 wherein
4 said controller includes a reset circuit for automatically resetting said
6 mobile communication unit to said database search telephone number
 entry mode after completion of a call in said normal telephone number
 entry mode.

2 23. The mobile communication unit of claim 19 further
4 comprising:

6 a receiver transmitter for connecting a call to said phone
8 number of said data record selected to be called by said mobile unit; and
 an incrementor for incrementing said frequency called in said
 data record for said telephone number called by said mobile
 communication unit each time said mobile communication unit calls said
 telephone number in said database.

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24. The mobile communication unit of claim 19, further
2 comprising a display displaying data records having stored character
4 strings beginning with said desired character string only when in said
database search telephone number entry mode.

25. The mobile communication unit of claim 19, wherein:
2 said database further stores speed dial numbers each
4 associated with a discrete numeric string;

4 said keypad is for
0 inputting said desired character string as a numeric
2 string,
6 selecting an input numeric string, and
8 selecting between calling said numeric string and
10 calling said speed dial number associated with said selected numeric
12 string.

26. The mobile communication unit of claim 25, said
4 keypad further comprising a SEND key and a mode key, and

4 said controller causing said mobile communication unit to
call said numeric string when said SEND key is pressed
6 after selecting said input numeric string, and
8 call said speed dial number associated with said
number sequence when said SEND key is press after said mode key
is pressed after selecting said input numeric string.

27. The mobile communication unit of claim 19, wherein:
2 said keypad is for selecting one of said data records having
4 stored character strings beginning with said desired character string; and
6 said controller selects another of said data records having
 stored character strings beginning with said desired character strings
 responsive an unsuccessful attempt to call said telephone number of said
 selected one data record.

28. The mobile communication unit of claim 27, wherein
2 said another of said data records is the data record of said data records
4 having stored character strings beginning with said desired character
 strings, other than said selected one data record, which has been called
 most frequently by said mobile communication unit.

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29. A mobile communication unit comprising:

2 a database storing data records for one or more telephone
4 numbers with each data record containing a stored character string
6 corresponding to phone numbers stored in said database and a frequency
8 called value representing a frequency with which said mobile
10 communication unit places a call to each said phone number stored in said
12 database;

14 a keypad for inputting a desired character string;

16 a controller for receiving said desired character string and
18 searching said database in a database search telephone number entry
20 mode for said data records having stored character strings beginning with
22 said desired character string, and providing a listing of data records
24 identified by said searching of said database together with frequency
called for each of said data records;

2 a screening circuit in said controller automatically switching
3 said mobile communication unit to a normal telephone number entry mode
5 if said database does not contain any data records beginning with said
7 desired character string;

9 a sorter for sorting said data records provided by said
11 controller;

13 a display device for displaying a grouping of said data records
15 in order as sorted by said sorter;

17 a selector for selecting a data record from said displayed
19 grouping to be called by said mobile communication unit;

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26 an incrementor for incrementing said frequency called in said
data record for said telephone number called by said mobile
communication unit each time said mobile communication unit calls said
28 telephone number in said database, and

30 a reset circuit for automatically resetting said mobile
communication unit to said database search telephone number entry mode
after completion of a call in said normal telephone number entry mode.